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NOTES FROM NEW WINDSOR.

EMILY L. MORTON, New Windsor, N. Y.

ISA TEXTULA H.-S.

Reading the last number of ENTOMOLOGICAL NEWS (October) I noticed a short paragraph by Mr. Dyar on the genus *Isa*. Dr. A. S. Packard having identified a small *Limacodes* for me as *Isa textula*, and as the moth seems but little known, I have written a short account of the species, which I have raised from the eggs and back again through all its changes.

Isa textula is a small moth nine-tenths of an inch in expanse, of a very satiny texture, with long fringes to all the wings, the color a pale wood color as light as white pine; on some specimens there is a faint indication of a t. p. and t. a. line broken and extending only half across the forewings, but in many specimens this is entirely wanting. The eggs are laid singly, scattered about, and, like most of the *Limacodes* eggs which I have seen, are without form, looking like tiny drops of gelatine, or coagulated dew, invisible to the naked eye on the leaves, but on white paper having a slightly yellowish tinge, increasing with the growth of the larva within, but nothing more than a tiny, irregular shining speck on the leaves, and hatch in from eight to ten days.

The young larva when first hatched are also almost invisible, and, even after the first moult, look only like a small, colorless aphis on the leaf. The third moult shows a lilac mark in the centre of the dorsum increasing with the growth, until the last moult, when it resembles a rude maltese cross, of a pinkish or purplish brown, surrounded by a yellow border with a central square dot on the elipse-shaped pea-green larva.

The food-plants are the chestnuts, both horse and *Castania visca*, English and wild cherry, oak, basswood, and probably other trees, as most of the *Limacodes* are very general feeders. On wild cherry the larvæ take from eight to ten weeks to come to their growth; on chestnut a somewhat shorter period, but it depends on what may be the heat or cold more than the food-plant. I have usually fed the larva on wild cherry, as it is not infested with aphides, and during the long period of growth from egg to cocoon it does not require so much time and attention to keep the food-plant clean and sweet. The larvæ spin their cocoons about September 5th to 20th, a small, roundish, brown, pod-like cocoon, with the usual lid of the *Limacodes*, and the moths hatch the following season from the 8th to the 25th of July, almost always in the afternoon, and remain hanging from the lid or side of the cage, until between half past eight or nine o'clock in the evening, when the males begin to seek their mates. *Isa textula* hangs with its abdomen curled over its back after the manner of *Pterophora diversilineata*.

Reading recently a number of the English monthly, "The Entomologist's Record," I was greatly interested in an account of "assembling," and never having seen the process described before in any of our journals, I will describe my method, which I hope may prove of interest, as the habits of the *Limacodes* seem to be so little known. I use a large gauze-wire cage about 20 x 15 inches, and 18 or 20 inches high, a door in the front and back, and painted a dark red or green, and place the newly-hatched female *textula* therein. About 8.30 P.M. I station myself by the cage with a glass tumbler and piece of pasteboard and watch for the males to come. If the *Limacodes* is a common one, like *E. stimulea*, *P. fraterna*, or *S. inornata*, there will usually be a score or more of males suddenly appearing, fluttering about the cage, always settling on the top or side, where the ♀ is resting, hustling each other with their wings and endeavoring to reach the

coveted ♀ inside the gauze. Now, if you want specimens, you catch them by putting the tumbler over them slipping the pasteboard under and transfer them to the cyanide bottle, but if you want fertile eggs you shake the males from the glass into the cage by the door opposite the lightest part of the horizon. After the female has once paired no more males will be attracted, so you must make up your mind beforehand whether it is specimens or eggs you most desire. I never use a light if breeding is my object, as there are scarcely any moths that will mate where a light is used; this is the reason the cage is painted a dark color, as you can see even in a very dim light the pale colored wings of the tiny males as they flutter around and over the dark gauze. *Isa textula* is a rare moth here, and I have rarely seen more than three males attracted in one evening; a dark, still, warm evening is always better for assembling, but even if it blows quite freshly some of the *Limacodes* will be attracted provided your cage is a little sheltered by trees or shrubbery, on the side from which the wind is coming. With some of the Bombycidæ and Sphingidæ, you may keep your cage in the house, in an open window, but I have never had any success with the *Limacodes* unless the cage was in an open space away from the house. I do not see how *Sisyrosea inornata*, however small, could ever be mistaken for *Isa textula*, being a very differently constructed *Limacodes*, a very much slenderer and lighter built insect, the thorax only one-tenth of an inch across while in *inornata* it measures half as much again, and the abdomen of *inornata* is fully twice the size of that of *textula*. I think it probable *I. textula* has been confounded with *Limacodes flexuosa*, but Dr. Packard has also identified this for me, and my specimens are darker colored with shorter fringes, narrower wings, the primaries more produced at the apex, especially in the ♀. The larva of *S. inornata*, Dr. Packard says in his "Forest Insects," was first described in the Harris Correspondence; it is one of the most beautiful of the *Limacodes*, but though I have repeatedly had the eggs from captive females, I have never yet succeeded in rearing more than two or three larvæ back again to the pupa. I, however, know its whole history, and will some day write it out for the readers of ENTOMOLOGICAL NEWS. The larva bears not the slightest resemblance to that of *Isa textula*.

Note on the Larva of Pachylia ficus (L.)

By T. D. A. COCKERELL, Kingston, Jamaica.

Pachylia ficus (Linn.)—Length about 80 mm. Head shiny jet-black, except the mouth parts, which are pale greenish. Thoracic shield dull black; the short caudal horn and the anal plates are black. Spiracles blackish. Body: back dull red, sides and under part dull pale bluish green, the two colors sharply defined; with a pale red longitudinal line near the lower edge of the red color on each side. On each of the last eight segments is an obscure narrow whitish oblique line on the green sides, crossing the spiracles. Legs pale bluish green, like the underside; sides of body wrinkled.

Food-plant, *Ficus* sp.

Described from a mature specimen about to pupate, found in Kingston, July 21, 1891. The moth emerged August 13th. Another mature larva, also found in Kingston, was brought to me by Anna Ashburn on the 2d of September.

The larva of this species is glaucous-green, whitish above, with a narrow yellow stripe on each side; until shortly before it changes to a pupa, when it assumes the very different coloration described above. This change of color is almost certainly protective, the red back being less conspicuous than whitish or green, as the larva crawls about in search of a suitable spot to pupate in.

In Weismann's "Studies in the Theory of Descent," p. 232, there is a foot-note by Prof. Meldola, in which this change is described from Burmeister. This account does not quite agree with the Jamaica larva, and if in South America the larva really changes after the third stage, and lives on the tree and feeds after assuming the red coloration, it apparently affords an instance in which a phase of color has arisen as protective at larval maturity, and has become so strong in the organization of the insect as to appear in some districts earlier in the life of the larva than is actually of use. It would be a curious case if it could be shown that this character had first appeared as useful, and had at length become injurious by reason of its excessive development! However, it is not so in Jamaica, and if the account of Burmeister's larva is correct, it may still be that there are some special conditions of environment in the district where it was found, that render the red useful not only at pupating time, but also on the tree. This might be the case, for example, if it fed on a tree whose leaves turned red at a certain time.

PREPARATORY STAGES OF ICHTHYURA BIFIRIA Hy. Edw.

By HARRISON G. DYAR, New York.

Egg.—Hemispherical or slightly conoidal, the base flat, but rounded at its edges; smooth under a lens, but under the microscope, covered with numerous, crowded, shallow depressions, which form by their edges narrow, roundedly, hexagonal reticulations. The color is dark gray before the egg hatches. Diameter 7 mm.

First stage.—Head shining black, labrum pale; width 35 mm. Body slightly flattened, whitish, cervical shield black; a few pale hairs; joints 5 and 12 are slightly enlarged dorsally; the lateral region, and joints 5, 7 and 12 dorsally are wine-red. Thoracic feet large, pale; the abdominal normal, all used in walking. Length 2.5 mm. The larva hatches by eating a round hole in the vertex of the egg, leaving the rest of the shell untouched. It lives, singly, in a shelter constructed by spinning two or more leaves together.

Second stage.—Head black and shining, the central suture deep; width 6.5 mm. Body flattened, pale whitish yellow, with narrow triplicate dorsal, and very broad lateral bands of dull wine color, as are also the humps on joints 5 and 12. Cervical shield and anal plate black; venter dull greenish; legs black.

Third stage.—Head flat in front, slightly bilobed, brownish black, but paler centrally around the clypeus; a few dark hairs; width 1.4 mm. Body pale yellow, joints 5 and 12 a trifle dorsal line, broad lateral and confused triple subventral lines, all dark brown. Cervical shield and anal plate blackish; scattered pale hairs arise from smooth, low, round tubercles, concolorous with the markings.

Fourth stage.—Head pale brown, shaded with black in front; jaws and ocelli black; a white shade on each side of the clypeus; width 2.6 mm. Body as before, but the lateral band is faintly divided by a double yellowish line, and joint 13 is nearly all yellowish. The round, smooth, piliferous tubercles are distinctly yellow in the yellow markings. Cervical shield small, bisected, pale brown; anal plate not distinguishable. Hair whitish, both from body and head. As the stage advances the colors become quite pale, and the appearance is much changed; humps on joints 5 and 12 very slight, dark purple. Ground color whitish

gray, becoming pale purple, a triplicate dark purple dorsal line, the central one most distinct, the others broader and diffuse. All these lines are more or less broken into mottlings. A similar stigmatal line with some purple mottlings subventrally; venter paler; spiracles black. The piliferous tubercles are normal in arrangement, much as the warts in *Halesidota*, row (4) small, posteriorly to the spiracles, row (7) apparently absent. The head is held out flat, as in *Gluphisia*.

Cocoon.—Composed of several leaves spun together and lined with threads.

Pupa.—Nearly cylindrical, flattened a little ventrally, gradually tapering posteriorly, but of nearly even width, no part enlarged; last abdominal segments rounded, cremaster long and slender, terminating in a knob that, under the microscope, is seen to consist of a row of radiating, strongly recurved hooks, which hold firmly to the silk of the cocoon. Color dark red-brown, the thorax and cases nearly black. Length 11 mm.; width 3.5 mm.

Food-plant.—Willow (*Salix*).

Larvæ from Yosemite Valley, Cal. These larvæ had but four stages, and there are two broods in a year.

Ichthyura bifiria, as well as *I. brucei* Hy. Edw., must come very near to *I. vau* Fitch, if they are not merely western forms of it, but the larva of *I. vau* is still unknown, so that it is impossible to compare the early stages.

A NOTE ON CYCHRUS.

By H. F. Wickham, Iowa City, Iowa.

"Arizona has not, to my knowledge, furnished even a specimen of Cychride;" (Dr. Horn, in Notes on the Biologia Centrali-Americana, monthly Proc. of Ent. Sec. A. N. S. June, 1886, p. ix.) During the Summer of 1890, while in the Pinal Mountains, about eighty miles from Tucson, my friend and companion, Dr. E. D. Peters, took four or five specimens of a *Cychrus* (*Scaphinotus*), which I thought to be *Snowii* Lec., near a little spring. Later in the day a search by myself resulted in the finding of another specimen.

Our knowledge of the distribution of *Cychrus* has been wonderfully extended during the thirteen years that had elapsed since

the publication by Dr. Horn of his Synopsis in the "Transactions of the American Entomological Society." At that time but three species of the division *Sphæroderus* were known, all from the Atlantic region, none of them ranging farther south than North Carolina. Since then the labors of Mr. Ricksecker have resulted in the discovery of two more species (*relictus* and *regularis*) from the Spokane River region of Washington, both of these having been also taken by myself at Cœur d'Alene, Idaho, in company with the third western species only lately described by Dr. Horn ("Ent. Am." vol. vi, p. 71) as *Merkelii*. This shows *Sphæroderus* to be northern rather than northeastern in its distribution, an equal number of species having been found on each side of the continent, none, however, being southern forms.

Scaphinotus, as is shown by the first paragraph, extends into Arizona besides covering in its distribution the region assigned to it by Dr. Horn, in his paper cited, from New York south to North Carolina and thence west to Colorado a range afterwards extended some distance southwards by the discovery of *C.* (*Scaphinotus*) *Snowii* in New Mexico.

Doubtless, the division *Pemphus* will remain characteristic of the north Pacific coast fauna, though *Brennus* supposed, until lately, to be confined to the coast fauna proper, has been shown by me (ENT. NEWS, vol. i, p. 33) to inhabit parts of Montana. The species recorded, *C. marginatus*, has heretofore been reported only from the stretch of coast from Oregon to Alaska, and its occurrence in Montana is of great interest, adding, as it does, another species to those common to the great central chain of mountains and the far north. During the glacial epoch, or just following it, this species probably inhabited the stretch of country from the Rockies to the coast, but the gradual northward retreat of the face of the glaciated area so changed the climate of this intervening region that *marginatus* was unable to retain its place. The Montana form already shows some minor differences from those found on the coast, and only time seems needed to differentiate it as a distinct species.

Until the discovery of *C. Rickseckeri*, the species of *Cychrus* proper were limited in our fauna to two strictly Pacific forms, *angulatus* and *tuberculatus*, and one from Utah, *C. Hemphillii;* but the first-mentioned insect is reported by Mr. Ricksecker, in a letter to me, to occur as far east as Clark's Ford, Mont., though

I believe the centre of its distribution to be the Cœur d'Alene district of Idaho, where I took it on my visit in 1889. *C. tuberculatus*, reported from Vancouver Island, occurs also in the mainland at Portland, Oreg., and Tacoma, Wash., but is still rare.

A perusal of these lines will show that in this genus every one of the divisions, except *Pemphus*, which contains but a single species, has been found to have a distribution much wider than that known to science when last written up, and I await further developments with a great deal of interest. Cannot some of the readers of ENT. NEWS furnish us with more notes on geographical distribution? Too little attention seems to have been paid this part of our science, and it is something in which every one can help.

Second Additions and Corrections to the list of Dragonflies (Odonata) of Manchester, Kennebec County, Maine.

BY MISS MATTIE WADSWORTH.

(See ENTOMOLOGICAL NEWS, vol. i, pp. 36, 55, and vol. ii, p. 11.)

5a. Amphiagrion saucium Burm.

1891, June 24, one ♀ in road.

6c. Enallagma cyathigerum Charp. race annexum Hag.

1891, June 16, one ♂ in meadow.

6d. Enallagma exsulans Hag.

1891, June 26, one ♁ near Lake Cobbosseecontee.

6e. Nehalennia irene Hag.

1891, June 9, one ♀ in road, near meadow; June 15, three ♀ ♀ in woods; June 19, one ♀ in woods.

24a. Macromia illinoiensis Walsh.

1891, July 10, one ♀ near brook.

32. This species called "Cordulia cynosura variety," in vol. ii, p. 11, is C. (Tetragoneuria) spinigera Selys.

All taken in 1891 have been identified, as all others have been, by Mr. Philip P. Calvert, of Philadelphia.

During the seasons of 1890 and 1891, additional specimens have been taken of several species noted as quite rare in the preceding lists. These are mentioned below.

6a. Enallagma ebrium Hag.

1891, June 16, two ♁ ♁ in meadow.

6b. Enallagma civile Hag.

1891, June 26, two ♁ ♁, one ♀ near Lake Cobbosseecontee.

13. Æschna (Basiaeschna) janata Say.

1890, June 21, one ♂ taken near brook. 1891, June 5 to 15, seven ♀ ♀, six ♂ ♂ taken near woods; June 15, a ♂ devouring a ♀ *Gomphus exilis* was taken.

17. Gomphus parvulus Selys.

1891, June 25, one ♀ near brook.

25. Epitheca (Somatochlora) Walshii Scud.

1891, July 30, one ♂ in meadow near brook; August 5, one seen flying.

26. Epitheca (Somatochlora) forcipata Scud.

1890, Aug. 14, one ♂ in meadow.

28. Cordulia (Somatochlora) lepida Selys.

1891, June, one ♂; June 26, one ♀ by roadside.

29. Cordulia (Somatochlora) libera Selys.

1890, June 19, one ♂ in woods. 1891, June 5 to 30, quite common in and near woods.

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HYMENOPTEROLOGICAL NOTES.—II.

By Wm. J. Fox, Phila., Pa.

Crabro nitidiventris n. sp.

♀.—Black, shining; first two joints of the antennæ entirely, line on prothorax above, broadest laterally, tubercles, an elongated spot behind them, dot on tegulæ, spot at base of wing, line on the basal half of the scutellum, two transverse spots on the upper surface of the metathorax, the apex of anterior and medial femora, the tibiæ and tarsi, and a large macula on each side of segments 2–5, all yellow, the extreme apex of the posterior tibiæ and the apical tarsal joints, brownish. Head quadrate; clypeus, front behind the antennæ, and the posterior orbits with bright silvery pubescence, most dense on the former; head clothed with pale fuscous hairs, finely and sparsely punctured, the punctures on the cheeks very delicate, strongest on the front; vertex depressed, with a strong, pear-shaped pit on each side near the top of inner eye margin; frontal impressed line deep; clypeus feebly carinated medially, the anterior margin armed with three teeth, which are widely separated; apical half of mandibles ferrugineus, the apex bidentate; scape of antennæ narrow, longer than the first three joints of the flagellum united, second joint of the flagellum nearly three times as long as the preceding one, and about two and a half times longer than the succeeding one. Thorax and legs sparsely clothed with pale fuscous pubescence, pertaining to silvery on the pleuræ and pectus; the thorax with fine, separated punctures, very fine on the pleuræ; prothorax slightly emarginate above; postscutellum parted by an impressed line; metathorax with two transverse enclosures on the

upper surface, the medial sulcus very strongly marked, and is deepest basally and on the posterior face, all the sulci marked with strong foveæ, the posterior face with the lateral edges marked with a series of rugæ, before the apex there are several very strong, transverse striæ; the top of the metapleuræ marked by a series of strong foveæ, which form an angle at about the middle; wings hyaline, tinged with brownish along the costa, nervures brown, the stigma black. Abdomen glabrous, sparsely clothed with pale fuscous hairs, most dense beneath and on segments 4–6 above; last segment above with a longitudinal, medial carina, which does not extend beyond the middle. Length 11—12 mm.

Two specimens, Camden County, N. J., July 5, 1891, and Illinois (coll. Amer. Ent. Soc.). The specimen from Illinois has the middle clypeal tooth indistinct. Related to *C. obscurus* and *C. contiguus*.

Crabro excavatus n. sp.

♀.—Black; head transversely quadrate; front subopaque, with fine and exceedingly close punctures; near the inner orbits, before the anterior ocellus, there is a short, oblique sulcus; vertex shining, with deep separated punctures; face very narrow in the region of the antennæ, the space between the eyes at this place is a little broader than the length of the third antennal joint; clypeus well carinated, the anterior margin entire, rounded out; antennæ short, the third joint about two and a half times longer than the second, and is a little longer than the two following joints united; the ocelli situated in slight, but distinct, depressions; mandibles strongly bidentate at apex. Prothorax emarginate medially; dorsulum with very strong punctures, the punctures confluent anteriorly; scutellum and postscutellum with strong, separated punctures, those on the postscutellum feeblest; metathorax roughened, with a strong medial sulcus, which extends to about the middle, where it is interrupted by a transverse ridge, the posterior face rugose, depressed medially; mesopleuræ rugose; wings subhyaline, nervures blackish. Abdomen shining, the segments depressed at base and apex, with distinct, separated punctures, beneath segments 2–5 smooth, with the exception of a series of strong punctures, which extend from side to side at about the middle; the last segment above strongly excavated; mandibles, except base and apex, prothorax above, tubercles, an elongated oblique spot on the mesopleuræ beneath the tegulæ, scutellum and two spots on the dorsulum at the anterior-lateral angles of the scutellum, the postscutellum, legs, the tarsi lighter, the first abdominal segment above, except the apical margin, which is black, the second above and beneath, except apical portion, all reddish brown;* scape and following two antennal joints, and a large, ovate spot on the second abdominal segment, situated at about the middle, yellow; head

* This may be due to being left too long in the cyanide bottle, but as part of the antennæ and two spots on the abdomen are yellow, it is probable that it is the natural color.

and thorax above clothed with short, erect, fuscous hairs; the clypeus, face, cheeks and thorax beneath with silvery pubescence. Length 9—10 mm.

♂.—Differs from the female as follows: joints five and six of the antennæ roundly emarginate beneath, the seventh joint slightly so; the third antennal joint very slightly, if any, longer than the fourth; the metanotum with eight or nine strong ridges, which extend from the base to the transverse ridge; wings darker along the costa. Abdomen strongly punctured, the punctures closer than in the female, the first segment, except the base and apex, and a transverse fascia on segments 2–5 above, reddish brown, the fascia on the third segment narrowest; beneath the abdomen is finely and rather closely punctured. Length 9 mm.

Described from two females and one male specimens. Collected by Mr. Chas. W. Johnson, in Florida, in the vicinity of St. Augustine.

(To be continued.)

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RHEXIDIUS.

BY EMIL BRENDEL, M.D.

This genus belongs to the second group of the tribe Trichonyni according to the arrangement of Mr. Achille Raffray, the first group having the posterior coxæ distant and the first ventral segment large, including the genera *Trichonyx* and *Amauronyx*, while the remaining genera, or the second group, have the posterior coxæ contiguous, or nearly so, and the first ventral segment very short, in some hardly visible. Among the latter group my attention is called to the genera *Trogaster*, *Rhexidius*, *Oropus* and *Prorhexius*.

Trogaster is characterized by having the first ventral segment visible (according to Mr. Raffray), while in the others it is said to be invisible, except as a button between the coxæ. But this, according to my investigation, does not apply to *Rhexidius* and *Oropus*, on which, by lifting the femur it can be traced to the sides of the abdomen, where it is even more visible than in the middle. Thus the difference between the four genera is rather inconspicuous.

With the genus *Trogaster* I am not acquainted, but by the description of Dr. D. Sharp, it should have an analogous form with *Oropus* and *Rhexidius*, and Capt. Casey indicated to me as the differences: the pronotum having the lateral spinous tubercle

nearer the middle, the frontal sulcus not reaching the occipital foveæ and having different forms of the antennæ in the sexes.

The only difference between *Oropus* and *Rhexidius* lies in the possession of a minute spinous tubercle at the sides of the pronotum in a line with the lateral foveæ. The length of the second ventral segment, which ought to be measured at the sides, not in the middle, where commonly intubation takes place, is larger, but in length not much more than subequal to the third and fourth ventrals; therefore *Prorhexius* is identical with *Rhexidius*.

Now I will describe a new species of *Rhexidius* which makes the difference between the other two genera very doubtful, and perhaps brings them very near to *Trogaster*.

Rhexidius trogasteroides n. sp.

♂.—The forms of the several parts of the body is exactly like *Oropus;* uniformly reddish brown. Length 1.66 mm. Head and prothorax granulated (as in *Rhexidius granulosus*), elytra densely punctured, abdominal dorsum nearly smooth. The head very transverse, though less so than in *R. granulosus*, occiput triangularly impressed at its base, occipital foveæ large, near the eyes and in a line with the anterior part of the eyes; the frontal ridge and the subjacent arcuated sulcus limited half way between foveæ and the supra-antennal swelling, the sulcus ending in a deep puncture just in front of the respective fovea (*Trogaster*). Antennæ as long as the head and half of the prothorax; joint 1 as thick as the width of the eye, cylindrical, longer than wide; 2 globular, two-thirds as thick as the first; 3 and 4 equal, rounded, somewhat transverse, much smaller; 5 projecting inside in form of a wedge, half as long outside, and three times as wide as the fourth; 6 as wide as 5, inflated inside, here as long as the first joint, and outside at the insertion as long as second; 7–10 gradually increasing in width, transverse, trapezoidal, together as long as the second, third and fourth conjointed; 7 as wide as the second; the 10th, or the base of the last joint as wide as the first; 11 as long as the four preceding, and beyond the middle more than twice as wide as the first joint (*Trogaster*). Palpi as in *Oropus*. Prothorax as in *Rhexidius* in sculpture, but the median sulcus has a deeper place in the anterior third, and the sides are rounded anterior to the line of the foveæ, here suddenly forming a sharp edge with a very short emargination producing a tubercle similar to *Oropus*, except that the tubercle is not as sharply pointed. Elytra as in *Oropus*, with four basal punctures and the respective lines, the third longer than the second, the fourth short and recurrent. Abdomen as in *Oropus*, with the dorsal border punctured, the penultimate ventral with a transverse impressed line; ♀ unknown.

Three specimens were discovered on Chestnut Ridge, Pa., by P. Jerome Schmitt, who deserves great honor as a circumspect entomologist.

A comment as to the generic differences is unnecessary, but there are two more specimens, ♂ and ♀, which were discovered in Franklin County, Pa., by my friend, H. Ulke, who kindly loaned them to me a year ago; they are in his cabinet, and may bring these genera still nearer together.

Rhexidius intermedius n. sp.

Uniformly brown. Length of ♂ 1.5 mm.; ♀ 1.66 mm.

♀.—Head as transverse as in *Oropus*, somewhat punctulate. Antennæ, without the last joint, as long as the width of the head, the last joint as long as the first and second together. Eyes very much smaller than in *Oropus;* occiput perpendicularly declining toward the neck in an angulated line from the sides to the middle of the base. Prothorax little wider than the head with a twice interrupted median sulcus and a straight transverse sulcus, which is triangularly dilated in the middle, ending in pubescent foveæ laterally situated inside of a slightly ovate depression, the base strongly punctured, the disc slightly uneven, impunctate; no crenulation or a spine at the sides. Elytra as in *Oropus*. Abdomen at the base in the middle depressed, the depression divided by a short carina; the borders of the first visible segment divergent; the first three visible segments equal, one-quarter of their width long, fourth and fifth shorter; ventrals nearly equal in length.

♂.—Has the ninth and tenth joints of the antennæ shorter, more transverse, and the last longer than in the female. Head, prothorax and elytra, more visibly punctulate. Eyes somewhat larger. Prothorax with the median sulcus not interrupted, but abbreviated in the anterior third. Abdomen as in the female, but the junction of the fourth and fifth segments transversely impressed.

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NOTES ON ARKANSAS LEPIDOPTERA.

By R. R. Rowley, Fort Smith, Ark.

Five hundred miles to the southwest of Curryville, Mo., where the writer has spent half a score of years in the study of Entomology and Geology of a most interesting region, is the "Border City," Fort Smith, Ark. A residence here since the middle of September has given him but limited opportunity to enter into the study of nature, but he could not, if he wished, close his eyes on the fairy-like creatures that flit from blossom to blossom in this city of flowers. The first finds were two splendid larvæ of that magnificent moth, *Citheronia regalis*, on a persimmon tree, where, from indications, a number of other caterpillars had been feeding; two larvæ of *Eacles imperialis* on maple; two of *Ceratomia*

amyntor and one of *Telea polyphemus* on elm; larvæ and cocoons of *Actias luna* on pecan, and one wandering caterpillar of *Deilephila lineata*. A fine pupa of *Macrosila cingulata* was found in a sweet-potato patch and several ragged imagos, brought to the class-room by pupils, indicate an abundance of this beautiful moth.

The first butterflies noticed were *Neonympha sosybius*, flitting aimlessly about the streets, and occasional specimens of *Papilio philenor* and *Limenitis ursula*. While *Colias eurytheme* was quite common, *C. philodice*, *Pieris protodice* and *P. rapæ* seemed much less abundant.

In October, *Callidryas eubule*, *Terias nicippe*, *T. lisa*, *Nathalis iole*, *Euptoieta claudia*, *Phyciodes phaon*, *Pamphila huron*, *P. phylæus* and *Pyrgus tesselata* were plentiful, the first two species at cultivated flowers and the others at the blossoms of *Helenium tenuifolium*, a thrifty weed about the streets and roads here.

Three fine examples of *Colias cæsonia* were taken at flowers, one *Grapta interrogationis* in the woods, one *Paphia troglodyta* at mud, four *Junonia cœnia* by the roadside and on flowers, several specimens of *Pyrameis cardui*, one *P. huntera*, two *Erisia texana*, a few *Phyciodes tharos* and a number of *Danais archippus* on *Helenium tenuifolium* blossoms.

A single ♀ *Agraulis vanillæ* was taken on Geranium flowers in the shade, about five o'clock P.M., late in October. One dark specimen of *Pyrgus*, probably a variety of *Tesselata*, was captured November 7th. The last butterflies seen, were *Terias lisa*, *T. nicippe*, *Pyrgus tesselata* and *Nathalis iole* on the 16th of September. Spring and Summer will doubtless add many more species to this list. The food-plant of *Iole* here is probably *Helenium tenuifolium*.

For assistance in the identification of a few of the species mentioned above, the writer is indebted to Mr. Wm. H. Edwards, of Coalburgh, and Dr. Henry Skinner, of Philadelphia.

For the determination of a plant to Prof. Geo. Vasey, of Washington, D. C.

"An electric insect killer is the latest novelty in that line. It is formed by a cover of wire gauze, which is placed over a lighted candle. The gauze is an electric circuit, and when insects touch it they are killed."

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for certain issue. Owing to low subscription rate, "extras" will be charged for, and when they are wanted, it should be so stated on the MS. along with the number desired. The receipt of all papers will be acknowledged.—ED.

☞ A SUBSCRIBER has sent us a remittance with name and address not given on subscription blank accompanying the same. We make it a rule to acknowledge the receipt of all remittances, and beg to be advised by those who have sent in their subscriptions and have received no acknowledgment.—TREASURER.

OWING to the sickness of the editor, we are unable to publish a plate with this number of the NEWS. Correspondence attended to soon.

AFTER many unexpected and unavoidable delays, the new Check List of Lepidoptera of Boreal America, by Prof. John B. Smith, has been completed, and is now ready to mail to applicants. The price is $1.00 per copy.

WILL the contributor who favored the NEWS with the interesting paper "On the species of *Oecanthus* Serv." kindly communicate with the editor, as his letter has been mislaid and his name is not attached to the manuscript of the paper referred to?

A VERY good suggestion comes to us from a progressive subscriber, viz.: to give each month a list of species added to the insect fauna of North America. This information will be appended to the "Literature" column, and we trust that it will be an improvement that will be appreciated by entomological workers.

A NEW VARIETY OF PAMPHILA.—*Pamphila massasoit*, var. *suffusa* Laurent. The describing of the many variations of Lepidoptera caught in the field is of value as well as of interest to the entomological world, but the attaching thereto of a name to burden our already over-crowded catalogues, seems to me to be little less than an entomological sin, but where the form described teems in numbers, or is known as a local variation, I think the same should be given an appropriate name. In the Pamphilas, particularly, there are several such forms or variations occurring among the species found around Philadelphia. One of these, *Pamphila massasoit*, var. *suffusa*, makes its appearance about July 4th. It is

found in low meadow- or swamp-lands. The variation consists principally in the yellow markings of the under surface of the posterior wings being almost obliterated by a suffusion of dark brown, while the under surface of the anterior wings is of a uniform dark brown, the light colored margin found in the normal form being entirely wanting. About one in every ten specimens caught will be found to be *suffusa;* the variation is generally found among the males, but also occurs in the females, but more sparingly where it occurs in the females. The insect is without the usual yellow spots on the upper surface of the wings.—PHILIP LAURENT, Phila.

SYNONYMS OF NOCTUIDÆ.—Mr. W. H. Patton has given in ENTOMOLOGICAL NEWS, vol. ii, p. 206, a synonym of "*Homohadena infixa* Wlk." which requires correction. I have seen Walker's type, in the British Museum, and find it exactly like the type of Mr. Grote's *H. kappa*, which is also in the British Museum. *H. incomitata* and *H. badistriga* are both as good species as are usually found in the Noctuidæ, and come at exactly opposite ends of the synoptic table in my revision of the species (Proc. U. S. Nat. Mus. xiii, 399). Harvey's type is not rubbed, and I have seen any number of specimens just like it. That *Xylophasia infixa* Wlk. probably referred to a species of *Homohadena* I indicated in my revision of *Xylophasia* (Proc. U. S. Nat. Mus. xiii, 446), but was not able to fix it positively. It would be interesting to know upon what Mr. Patton bases his synonymy.—JOHN B. SMITH, New Brunswick, N. J.

Prof. KELLICOTT'S "Note on Exceptions" brought vividly to my mind the number of interesting varieties of *Caberodes confusaria* that had escaped from my collecting-bottle by its remarkable powers of resisting the action of cyanide. I have often sought for an explanation, but without definite results. In my observations, Hymenoptera and Diptera are the most sensitive to the fumes of cyanide, which I have thought might arise from their nervous activity producing rapid respiration. Water beetles as a rule are slow to yield to its influence, which is probably the result of their having a supply of pure air under their elytra which would last for a while. Newly-hatched beetles may remain for a whole day in a strong bottle and revive again when exposed to the air, the result of their partially dormant condition. *Caberodes confusaria* is an active insect, and therefore ought to breathe rapidly, and so get the full benefit of the poison, but in its case neither the principle nor the poison works satisfactorily.—I. ALSTON MOFFAT, London, Ontario.

I THINK a "wave" of *Erebus odora* must have struck Colorado this Summer. I have occasionally met with this species in the State before, but not more than one example in a season. This year, however, was a notable exception; one day last June I took one on the sidewalk at Colorado Springs; the same evening I found one on the platform at Cañon City Depot. The next morning I reached Salida just at daybreak; during the two days I stayed there I took about a dozen pretty fair examples. These were resting on the lamp-posts, or on the ground close by. It was

quite a rainy time in this part of Colorado, and I saw fragments of a good many in the mud. The lamp trimmer told me they had been quite a nuisance for more than a week, flying into houses and stores where there was a bright light, in many instances causing alarm (he called them bats). On my return from southwest Colorado, two weeks later, our train stopped at Salida at 9 A.M.; during the "twenty minutes for refreshments" I looked round under the lamps. In a coal-box, near one, were two battered examples of *E. odora*, but on the lamp-post, about seven feet from the ground, was a specimen of the silken, gray beauty *zenobia*, the first I had seen alive. I have visited this district many times in the last seven years, and my late friend, W. S. Foster, a keen collector, resided there two years, yet we never saw either species there before, and I feel pretty certain that their occurrence this year is something unusual.

DAVID BRUCE, Brockport, N. Y.

A SPECIMEN of *Xylocopa*, received from Mr. H. F. Wickham, bearing the label Fort Yuma, Cal., turns out to be the Cuban *X. cubaecola* Lucas. To the best of my knowledge, this species has not been recorded from any other locality, although it occurs, probably, in Mexico. The following table will assist in determining the Californian species of *Xylocopa:*

Abdomen bottle-green, bronzed; front in ♀ with a strong projection. Length 22—25 mm. . . . . **californica** Cr.

Abdomen bronze-purple; frontal projection almost obsolete, having the appearance of a faint tubercle. Length 18 mm. . **purpurea** Cr.

Entirely black ♀; ♂ of *cubaecola* entirely fulvous, with fulvous pubescence; ♂ of *orpifex* with the face and clypeus yellowish.

Ventral abdominal segments strongly carinated; clypeus with the punctures becoming somewhat obsolete medially; ♂ fulvous. Length ♀♂ 18—23 mm. . . . . **cubaecola** Luc.

Ventral segments of the abdomen faintly carinated; clypeus equally punctured throughout; ♂ with the thorax clothed with pale pubescence. Length ♀♂ 17—18 mm. . . . **orpifex** Sm.

WILLIAM J. FOX.

WHILE on a trout fishing trip on the Nepigon River last July we broke camp some forty miles up river, after three days' of showery weather, and, with birch-bark canoes, started for Red Rock, the Hudson Bay Company's post at the mouth of the river. There are a number of rapids around which canoes and camp equipage must be carried, and at which the different meals are usually cooked, while the Indians are making the portage. On July 14th, a hot day following the rains, we were portaging around Cameron Pool and rapids, when one of the party, who had descended the higher land to the bank of a little creek, came rushing back with an ordinary fish landing-net containing ten fluttering *Limenitis arthemis* which he had caught with one stroke. Of course they were ruined, but the entomologist of the party, upon investigation, found the ashes, where camp fires had been made upon the banks of the creek, completely cov-

ered with this beautiful butterfly, one space of about four and a half feet in diameter being entirely hid by a gorgeous coloring of purple, black and white, which shone beautifully in the bright sun. The first stroke of the net disturbed them, but 47 specimens were taken as they hovered about without moving from the spot, and over 100 were taken within a space of 30 feet square. They seemed to be attracted by the brine or water thrown from the pans after freshening bacon and salt pork at the camp fires. Paddling down the creek we passed another congregation of like proportions, but we had a forty-mile canoe voyage to complete by ten o'clock that night in order to catch a steamer at Port Arthur, so they were not disturbed. It is not often an entomologist stumbles upon a sight so beautiful.—FRANK S. DAGGETT, Duluth, Minn.

Perophora melsheimerii.—This elegant case bearing larva was taken at Sugar Grove, O., September 26th, feeding on oak. The single larva examined differs from that described by Harris in the absence of the antenna-like appendages at the side of the head; this is also characterized by Packard in "Forest Insects." It is also slenderer than others described, nor are the "spiracles so situated as to be visible from above," except the last pair. The prothoracic segment is not dark like the head, but concolorous with the whole anterior third, *i.e.*, pale brown with diffuse lateral stripes. The case, too, whilst of the same general type as that figured by Harris, is a more finished piece of architecture. One side, the floor, is elliptical and plane; the opposing piece, the roof, is also elliptical, but both longer and wider and cut with the mid-vein in the longer diameter, so that when the edges of the two are sewn together it arches up, forming a roof; the mid-vein thus forms the ridge of the roof; this also projects at the ends constituting the verandas over the round openings. The dimensions are: length, 28 mm.; width, 8 mm.; height, 6 mm.; diameter of openings, 4 mm.

I have not seen the artificer at work. It would certainly be interesting to observe how, with the simple tools at his disposal, so wonderful a house is built. I imagine that the plan of procedure is about as follows: two closely parallel leaves are selected; these are spun together along the elliptical outline of the finished product, the plane one being first strengthened by a silken lining; then by cutting away the leaves about the outside the case is set free.—D. S. K.

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of specimens to be unlimited for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2 cent stamp with all insects for return of names. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Entomological Literature.

ZOOLOGISCHER ANZEIGER (Leipzig), Nov. 2, 1891.—The lateral eyes of spiders, by K. Kishinouye, figs. On the anatomy of the male sexual organs of the Honey Bee, by G. Koschewnikoff.

TRAVAUX ET MEMOIRES DES FACULTES DE LILLE. I, No. 4, 1891.—The wax of Bees (analysis and adulterations), by A. and P. Buisine.

LE NATURALISTE (Paris), Nov. 1, 1891.—Protective resemblance in European Lepidoptera, by F. Plateau; figs. Description of new Lepidoptera,* by P. Dognin; *Lafajana* n. gen. Development of *Hydrophilus piceus*, by L. Planet; figs.—Dec. 1, 1891.—Diagnoses of new Lepidoptera,* by P. Dognin. Habits and metamorphoses of *Corœbus amethystinus* Oliv., by Capt. Xambeu.

COMPTE RENDU. SOCIETE ENTOMOLOGIQUE DE BELGIQUE, Oct. 3, '91. —Two new species and a new genus of African Lepidoptera,* by F. J. M. Heylaerts; *Gymnelema* n. gen. Melanges Entomologiques: VII. Diagnoses of Coleoptera from the Congo,* by A. Duvivier; *Djabiria*, *Phrynetoides* n. gen. Dichotomous table to aid in determining the Belgian species of Coleoptera Heteromera (last part), by L. Coucke. Enumeration of the Hemiptera of Belgium, by E. Coubeaux; Heteroptera. *Papilio machaon* var. *marginalis*, by M. Robbe.

NOTES ON CALOSPASTA Lec., by G. H. Horn, M.D. (reprint from Proc. Amer. Philos. Soc. xxix, pp. 99–102), Oct. 27, 1891. A synoptic table of the species is given. *C. histrionica*, *C. morrisoni*, S. Cal., n. sp.

REVUE DES SCIENCES NATURELLES DE L'OUEST, 4, October, 1891, Paris.—General considerations on the classification of the Acarines, followed by an attempt at a new classification, by Dr. Trouessart (to be continued).

COMPTE RENDU. SOCIETE DE BIOLOGIE (Paris), Nov. 20, 1891.—Organization of a thoracic ganglion in some Coleoptera of the tribe Melolonthina, by A. Binet. A peculiar Acariasis on Paduan fowls produced by a new Acarine species, *Lophoptes patavinus*, by P. Megnin; figs. On the intermediate host of *Echinorhynchus gigas* in America, by C. W. Stiles [*Lachnosterna*].

ENTOMOLOGISCHE NACHRICHTEN (Berlin), xvii, 21, November, 1891. —Some remarks on the German species of *Calathus*,* by C. Verhoeff. List of a collection of Coleoptera from Cordoba in Argentina, by Dr. Frenzel. On doubtful species of *Rhizotrogus*, a clear answer to Herr E. Brenske, by Dr. G. Kraatz.—No. 22, November, 1891.—A new contribution to the knowledge of the German *Saldæ*,* by C. Verhoeff. Diptera collected by Herr F. Grabowsky in Hartz Mountains, by V. von Roeder-

* Contains new species other than North American.

New Singing Cicadæ from Cameroon collected by Dr. Paul Preuss,* by Dr. F. Karsch; *Trismarcha*, *Nablistes*. n. gen.

DENKSCHRIFTEN DER KAISERLICHEN AKADEMIE DER WISSENSCHAFTEN. MATHEMATISCH-NATURWISSENSCHAFTLICHE CLASSE, lvii. Wien, 1890 (1891).—Comparative Studies on the Germ-band (Keimstreif) of Insects, by V. Graber; 12 plates, 38 figures.

ERGAENZUNGSHEFT ZUM 68. JAHRESBERICHT DER SCHLESISCHEN GESELLSCHAFT FUR VATERLANDISCHE CULTUR. Breslau, 1890 (1891).—Contributions to the knowledge of the European Zoocecidæ and their distribution, by G. Hieronymus.

VERHANDLUNGEN DES NATURHISTORISCHEN VEREINS DER PREUSSISCHE RHEINLANDE, WESTFALENS UND DES REG.-BEZIRKS OSNABRUECK. xlviii, 1. Bonn, 1891.—Biological Aphorisms on some Hymenoptera, Diptera and Coleoptera, by C. Verhoeff; 3 plates.

OFVERSIGT AF FINSKA VETENSKAPS-SOCIETETENS FORHANDLINGAR, xxxii, 1889–90. Helsingsfors, 1890 (1891?).—Contributions to the knowledge of the Coleopterous Fauna of Southwestern Siberia—Curculionidæ,* by J. Faust.

BERICHTE DER NATURFORSCHENDEN GESELLSCHAFT ZU FREIBURG I. B., v, 1. Freiburg I. B., 1890 (1891).—On reproduction of the Diplopods (Chilognatha), by O. von Rath; 1 plate.

ATTI DELLA R. ACCADEMIA DELLE SCIENZE DI TORINO, xxvi, 2, 1890–91.—The European species of the genus *Chrysotoxum* Meig.,* by Dr. E. Giglio-Tos; 1 plate.

JAHRBUCHER DES NASSAUISCHEN VEREINS FUR NATURKUNDE, 44. Jahrgang. Wiesbaden, 1891.—Observations on the manner of living and development history of some indigenous species of beetles, by Dr. Buddeberg. Macrolepidoptera of the lower Rhine country, 2d part, by A. Fuchs. Catalogue of the Coleoptera of Japan, 2d supplement, by H. von Schoenfeldt.

LA NATURALEZA, 2d series, II, 1. Mexico, 1891.—Description of indigenous Coleoptera, by Dr. D. Eugenio Duges (for new species, see *post*); 2 plates.

PROCEEDINGS OF THE CALIFORNIA ACADEMY OF SCIENCES, 2d series' III, 1. Sept. 1, 1891.—Description of the larva of *Dascyllus davidsonii* Lec., and a record of its life-history, by J. J. Rivers; 1 plate. New species of Scarabæidæ, id (see *post*).

BULLETIN OF THE BUFFALO SOCIETY OF NATURAL SCIENCES, v, 3, '91.—List of the Macrolepidoptera of Buffalo and vicinity, by Edw. P. Van Duzee.

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* Contains new species other than North American.

LIST OF LEPIDOPTERA OF BOREAL AMERICA, by John B. Smith, assisted by Henry Skinner, M.D., Geo. D. Hulst, Ph. D., C. H. Fernald, Ph. D., C. V. Riley, Ph. D. Philadelphia, Amer. Ent. Soc. 1891, 124 pp., 6020 species listed.

CONTRIBUTIONS TOWARDS A MONOGRAPH OF THE NOCTUIDÆ OF TEMPERATE NORTH AMERICA.—Revision of the species of Mamestra, by John B. Smith (from Proc. U. S. Nat. Mus. xiv, pp. 197–276, pl. viii–xi), Washington, 1891 (for new species, see *post*).

DESCRIPTIONS OF NEW CYNIPIDÆ IN THE COLLECTION OF THE ILLINOIS STATE LABORATORY OF NATURAL HISTORY, by C. P. Gillette, 1891; 1 plate (see *post*).

JOURNAL OF THE INSTITUTE OF JAMAICA, I, 1, Kingston, November, 1891.—Notes on the transformations of some Jamaica Lepidoptera, by T. D. A. Cockerell.

NEW SPECIES OF NORTH AMERICAN INSECTS DESCRIBED IN THE PRECEDING LITERATURE.

COLEOPTERA.

Calospasta histrionica Horn, Proc. Amer. Philos. Soc. xxix, p. 100, San Diego, Cal. *C. morrisoni*, p. 102, So. California.

Buprestis jimenezi Duges, La Naturaleza, 2d series, II, p. 7, fig. 10, Jalapa.

Melanophila nigra Duges, l. c., p. 8, fig. 11, Tupataro (Guanajuato).

Acmæodera moesta Duges, l. c., p. 11, fig. 17, Guanajuato. *A. jucunda* p. 14, fig. 20, Acapulco. *A. sinaloensis*, p. 14, fig. 21, Motagé, Sinalva.

Chrysobothris sobrina Duges, l. c., p. 19, Guanajuato. *C. armata*, p. 19, fig. 29, Chiapas. *C. ignota*, p. 20, fig. 30, Tupataro, Guanajuato.

Agrilus albofasciatus Duges, l. c., p. 23, fig. 35, Guanajuato. *A. de Borrei*, p. 24, fig. 36, id. *A. Sallei*, p. 24, fig. 37, id. *A. metallescens*, p. 26, fig. 39, id. *A. parvus*, p. 26, fig. 60, id. *A. bimaculatus*. p. 26, fig. 40, id. *A. fossulatus*, p. 27, fig. 41, id. *A. sexmaculatus*, p. 27, fig. 42, id. *A. rubrovittatus*, p. 28, fig. 44, id. *A. caliginosus*, p. 29, fig. 46, Tupataro. *A. igneosignatus*, p. 29, fig. 47, id. *A. cupreomaculatus*, p. 30, fig. 48, id. *A. tupatarensis*, p. 31, fig. 59, id. *A. consobrinus*, p. 32, fig. 51, id. *A. Kerremansi*, p. 32, fig. 52, id. *A. purpureus*, p. 31, fig. 53, Guanajuato. *A. tarrascus*, p. 33, fig. 54, Michoacan. *A. alemani*, p. 33, fig. 55, Guanajuato. *A. nanus*, p. 33, fig. 56, Tupataro. *A. carmineus*, p. 34, fig. 57, id. *A. novus*, p. 34, fig. 58, id. *A. chlorus*, p. 35, fig. 59, id.

Taphrocerus leoni Duges, l. c., p. 35, fig. 61, Siloa, Guanajuato, Michoacan. *T. Kerremansi*, p. 35, fig. 62, Tupataro.

Brachys chapusi Duges, l. c., p. 36, fig. 63, Tupataro. *B. hexagonalis*, p. 36, fig. 64, Guanajuato.

Lygirus Bryanti Rivers, Proc. Cal. Acad. Sci. (2), III, p. 97, Lower California.

LEPIDOPTERA.

Carphoxera n. gen. (Acidalinæ) Riley, Insect Life, iv, p. 112. *C. ptelearia*, p. 112.

Mamestra determinata Smith, Proc. U. S. Nat. Mus. xiv, p. 209, Col. *M. desperata*, p. 221, Me., N. H., Cal. *M. invalida*, p. 225, Cal. *M. u-scripta*, p. 228, Cal. *M. quadrata*, p. 248, Cal. *M. circumcincta*, p. 253, Cal. *M. longiclava*, p. 265, Col. *M. orbiculata*, p. 266, Col.

HYMENOPTERA.

Diastrophus scutellaris Gillette, Bull. Ill. State Lab., N. H.?, p. 192, Ill. *Antistrophus silphii*, p. 192, Ill. *A. laciniatus*, p. 194, Ill. *A. rufus*, p. 195, Ill. *A. minor*, p. 196. *A. bicolor*, p. 197, Ill. *Acraspis compressus*, p. 197, Iowa. *Dryophanta lanata*, p. 198, Iowa. *Chilasphis ferrugineus*, p. 200, Iowa. *Aulax bicolor*, p. 201, Ill. *Synergus magnus*, p. 202, Mich. *S. villosus*, p. 202, Iowa. *Coptereucoila marginata*, p. 203, Ill. *Eucoila 7-spinosa*, p. 204, Ill. *Eucoilidea rufipes*, p. 205.

Doings of Societies.

ENTOMOLOGICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA.—A regular meeting was held in the Hall, Oct. 22, '91, Director Geo. H. Horn, M.D., presiding. Meeting called to order at 8.20 P.M. Members present: Martindale, Laurent, Ridings, Horn and Skinner. Associates: Fox and Liebeck. The Publication Committee reported favorably on papers No. 255 and 256, entitled "Notes on North American Tachinidæ, sens. str., with Descriptions of New Genera and Species," by C. H. Tyler Townsend, and "Random Studies in North American Coleoptera," by Geo. H. Horn, M.D. Paper 257 was presented for publication. Mr. Nathan Banks, of Washington, D. C., was duly elected an Associate of the Section. HENRY SKINNER, *Recorder*.

A regular meeting was held in the Hall, Nov. 25, 1891. The meeting was called to order at 8.20 P.M. In the absence of the Director, Mr. Blake presided. Members present: Messrs. Ridings, Laurent, Blake, Skinner and Welles. Associates: Calvert, Nell and Haimbach. The report of the Executive Committee was read and received. A number of American and European Odonata were presented by Mr. Calvert; also the Jamaican Odonata collected by Mr. Wm. J. Fox. Donations to the library were

read. The Publication Committee reported favorably on a paper entitled "A Revision of the North American species of *Phlepsius*," by Edw. P. Van Duzee. Papers Nos. 258, 259 and 260, were presented for publication.

Mr. Calvert stated that in the Trans. Amer. Ent. Soc. xvii, p. 33, 1890, he had first described the supposed female of *Somatochlora Walshii* Scud., remarking then that it was much like the female of *S. forcipata* Scud., specimens of which he had not then seen. During the Summer of 1891 he had received the female and three males of *forcipata* from Prof. F. L. Harvey, at Orono, Me. A comparison of the females of *Walshii* and *forcipata* showed that the former was distinct. He knew of no evidence that the female *Walshii* was other than he had described it to be. Miss Wadsworth took a second male of *Walshii* at Manchester, Me., during the season of 1891; the first male which she had taken was now in Mr. Calvert's collection.

Dr. Skinner, Mr. Ridings and Mr. Laurent, were appointed a committee to make nominations for the coming year. Mr. Ridings moved that, when the Section adjourn, it adjourn to meet on the second Monday in December. HENRY SKINNER, *Recorder.*

A regular meeting was held in the Hall, Dec. 14, 1891, Director Geo. H. Horn, M.D., presided. Members present: Messrs. Horn, Welles, Martindale and Ridings. Associates: Calvert, Fox and Johnson. In the absence of the Recorder, owing to sickness, Mr. J. H. Ridings acted as such. The reports of the Treasurer and of the Joint Committee on ENTOMOLOGICAL NEWS were read. The committee on nominations named the following to serve as officers for the ensuing year: Director, Geo. H. Horn, M.D.; Vice-Director, Isaac C. Martindale; Recorder, Henry Skinner, M.D.; Treasurer, E. T. Cresson; Conservator, Henry Skinner, M.D.; Publication Committee: J. H. Ridings and Philip Laurent. On motion, the Recorder was directed to cast a ballot for the Section, and the above were declared elected. J. H. RIDINGS, *Recorder, pro tem.*

THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, November 5, 1891.—Messrs. Theo. Gill and C. W. Stiles were elected active members of the Society, and Rev. C. J. S. Bethune, of Port Hope, Canada, and Prof. H. A. Morgan, of Baton Rouge, La., corresponding members.

Under short notes, etc., Mr. Schwarz exhibited some fine and complete examples of the galleries made by *Hylesinus sericeus* in the bark of *Abies menziesii* from the Wahsatch Mountains of Utah. These galleries closely resemble those made by the species of *Scolytus*.

The Secretary read a note by Mr. Wm. D. Richardson, of Fredericksburg, Va., corresponding member of the Society, on the life-history of *Loma Sayi*. The food-plant of this species is *Commolyna virginica;* the eggs are laid singly on the leaves, and the larvæ usually bore in the flower stalks, ejecting their fæces from the entrance hole of the burrow. Discussed by Mr. Schwarz.

Dr. Marx exhibited two remarkable spiders occurring in our fauna: (1) a representative of the South American genus *Nops* characterized by having but two eyes; (2) a puzzling species, the affinities of which he pointed out. It resembles an *Epeira*, but is altogether different in characters.

Mr. Schwarz read a paper on the time of flight in Scarabæid beetles, in which he related an observation made last June by Mr. H. C. Hubbard and himself concerning an undescribed species of *Lachnosterna* which flies before sunset in the alpine regions of Utah. He added remarks on the flying habits of other species of *Lachnosterna* and of Scarabæid beetles in general. It appears that in this family the unity in habit regarding the time of flight is generally maintained so far as genera are concerned, and that there are comparatively few exceptions to this rule.

Mr. Schwarz also exhibited a species of the family Monommidæ collected on Key West and at Biscayne Bay, Fla., and stated that after a careful study he has come to the conclusion that it is identical with *Aspathines ovatus* Champion recently described from Central America, which adds a new genus to our fauna. Discussed by Messrs. Marlatt, Howard, Mann and Schwarz.

Mr. Howard read a paper on the "Habits of Molittobia," suggested by Mr. Ashmead's communication at the proceeding meeting. He gave a comprehensive review of the literature, showing all of the hosts of this genus of parasites, proving that it is both parasitic and hyperparasitic. He added an account of the rearing of *M. pelopæi* Ashm. from dipterous puparia found in Pelopæus cells by Mr. A. N. Caudell. Discussed by Mr. Ashmead.

Mr. Banks read a paper entitled "A new genus of Phalangiidæ from North America," in which, under the name *Caddo* nov. gen. *agilis* n. sp., he described a peculiar Phalangid collected in woods near the seashore on Long Island. Figures representing the peculiar features of the insect were exhibited.

Dr. Marx gave some remarks on the geographical distribution of spiders, and stated that the Drassidæ, formerly supposed to be boreal in habitat, were now found to occur in the tropics in abundance, and that in fact we have not a single family that is entirely northern in range. In the Attidæ, however, certain genera may prove to be altogether boreal, but the family is not well worked up.

C. L. MARLATT,
Recording Secretary.

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